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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/533,994	05/05/2005	D. Stephen Lane	00839-03	2589

34444 7590 02/14/2006

UNIVERSITY OF VIRGINIA PATENT FOUNDATION  
250 WEST MAIN STREET, SUITE 300  
CHARLOTTESVILLE, VA 22902

EXAMINER
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MRUK, BRIAN P

ART UNIT	PAPER NUMBER
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1751

DATE MAILED: 02/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/533,994	<b>Applicant(s)</b> LANE ET AL.	
	<b>Examiner</b> Brian P. Mruk	<b>Art Unit</b> 1751	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-82 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-82 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

### ***Claim Objections***

2. Claims 65, 69-73 and 77-81 are objected to because of the following informalities: In instant claims 65, 69-73 and 77-81, the phrase "The method of" should be amended to recite "The composition of", since independent claims 60, 66 and 74 are drawn to composition claims, and not method claims. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-82 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Bennet, WO 01/40547.

Bennett, WO 01/40547, discloses a method for the cathodic protection of concrete (see abstract) comprising adding a lithium salt, such as lithium nitrate, into the

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cementitious grout or mortar (see page 7, lines 8-27). It is further taught by Bennett that the lithium nitrate is added in a concentration of about 0.05 to 1.0 grams (dry basis) per cubic centimeter of grout (see page 13, lines 19-27), per the requirements of the instant invention. Specifically, note Examples 1-3. Therefore, instant claims 1-82 are anticipated by Bennet, WO 01/40547.

In the alternative that the above disclosure is insufficient to anticipate the above listed claims, it would have nonetheless been obvious to the skilled artisan to produce the claimed composition, as the reference teaches each of the claimed ingredients within the claimed proportions.

6. Claims 1-82 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Bennett, U.S. Patent No. 6,033,553.

Bennett, U.S. Patent No. 6,033,553, discloses a method for the cathodic protection of concrete (see abstract) comprising adding a lithium salt, such as lithium nitrate, into the concrete (see col. 3, lines 10-45). It is further taught by Bennett that the lithium nitrate is added in a concentration of about 10 to 400 grams (dry basis) per square meter of concrete (see col. 6, lines 35-54), per the requirements of the instant invention. Specifically, note Examples 1-2. Therefore, instant claims 1-82 are anticipated by Bennet, U.S. Patent No. 6,033,553.

In the alternative that the above disclosure is insufficient to anticipate the above listed claims, it would have nonetheless been obvious to the skilled artisan to produce

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the claimed composition, as the reference teaches each of the claimed ingredients within the claimed proportions.

7. Claims 1-82 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Bennett, U.S. Patent No. 6,217,742.

Bennett, U.S. Patent No. 6,217,742, discloses a method for the cathodic protection of concrete (see abstract) comprising adding a lithium salt, such as lithium nitrate, into the cementitious grout or mortar (see col. 3, lines 25-55). It is further taught by Bennett that the lithium nitrate is added in a concentration of about 0.2-2.0 grams (dry basis) per cubic centimeter of hardened grout or mortar (see col. 5, line 45-col. 6, line 4), per the requirements of the instant invention. Specifically, note Example 1. Therefore, instant claims 1-82 are anticipated by Bennet, U.S. Patent No. 6,217,742.

In the alternative that the above disclosure is insufficient to anticipate the above listed claims, it would have nonetheless been obvious to the skilled artisan to produce the claimed composition, as the reference teaches each of the claimed ingredients within the claimed proportions.

8. Claims 1-82 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Stokes et al, U.S. Patent No. 6,022,408.

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Stokes et al, U.S. Patent No. 6,022,408, discloses a process for making cement and concrete, such as gravel, sand, crushed stone, and Portland cement (see abstract and col. 1, lines 20-30) comprising adding a lithium containing material, such as lithium nitrate, to the cement, heating the cement to form a clinker, and cooling the clinker (see col. 4, line 45-col. 5, line 59). It is further taught by Stokes et al that the lithium containing compound is added into the cement in an amount sufficient to provide a molar ratio of lithium to sodium equivalent in the resultant clinker of 0.1:1 to 10:1 (see col. 5, lines 8-17), per the requirements of the instant invention. Specifically, note Examples 1-4. Therefore, instant claims 1-82 are anticipated by Stokes et al, U.S. Patent No. 6,022,408.

In the alternative that the above disclosure is insufficient to anticipate the above listed claims, it would have nonetheless been obvious to the skilled artisan to produce the claimed composition, as the reference teaches each of the claimed ingredients within the claimed proportions.

9. Claims 1-82 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Foltz et al, U.S. Patent No. 5,985,011.

Foltz et al, U.S. Patent No. 5,985,011, discloses a process and composition for controlling damage in cementitious materials (see abstract) comprising adding a lithium containing material, such as lithium nitrate, to the cementitious material (see col. 3, line 10-col. 4, line 12). It is further taught by Foltz et al that the cementitious material

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includes all hydraulic cements, such as Portland cement, fly ash, pozzolans, slag, and metakaolin (see col. 4, line 61-col. 5, line 3), and that the lithium containing compound is added into the cement in an amount of 0.01-15 molar (see col. 5, lines 30-38), per the requirements of the instant invention. Specifically, note Examples 1-3. Therefore, instant claims 1-82 are anticipated by Foltz et al, U.S. Patent No. 5,985,011.

In the alternative that the above disclosure is insufficient to anticipate the above listed claims, it would have nonetheless been obvious to the skilled artisan to produce the claimed composition, as the reference teaches each of the claimed ingredients within the claimed proportions.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian P. Mruk whose telephone number is (571) 272-1321. The examiner can normally be reached on Mon-Thurs (7:00AM-5:30PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra Gupta can be reached on (571) 272-1316. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*BPM*

Brian P Mruk  
February 11, 2006

*Brian P. Mruk*

Brian P Mruk  
Primary Examiner  
Art Unit 1751